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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,205	12/12/2000	Kaoru Okuno	50212-174	1983

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EXAMINER
HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/734,205	OKUNO ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roba 6371394 in combination with Jeskey 4925473 and in view of Halvorson 5624507.

This rejection is substantially the same as the previous rejection (reproduced below) except for: Roba does not teach the newly added limitation of changing of the composition of gases (or "gasses" for claims 3-4; Examiner is treating these two spellings identically). However, Roba does teach that the varying one or more process parameters (col. 11, lines 32-35) but specifically mentions only temperature. From Halvorson, figures 2 and 3, there can be as much as a 40% change in heat transfer depending upon the mole fractions in the heat-transfer gas. Furthermore, col. 1, lines 11-24 discloses for cooling (the opposite of Roba's heating) such can be improved by two methods: 1) change in heat transfer coefficient, and 2) change in temperature.

Generally speaking, cooling and heating are essentially the same thing: a transfer of heat energy. It is deemed that Halvorson's teaching that the two ways of improving heat transfer suggests that they are equivalents. Alternatively, Halvorson's teaching suggests that they the two ways of improving heat transfer are the two most significant modes. Thus one looking at Roba's teaching of varying "one or more process parameters" but sees only the example of furnace temperature would realize it would have been obvious to also change the heat transfer coefficient (by changing the

gas composition) because they are both equivalents (or because it is recognized that it is an effective way of changing heat transfer.)

Using Roba as the primary reference: Roba discloses the invention substantially as claimed (see previous rejections). However, Roba does not teach changing the gas flow as claimed, rather Roba discloses changing the temperature with no indication as to how to do it: see col. 7, lines 1-7 and col. 11, lines 32-35. Jeskey teaches an improved method for drawing a preform: see the paragraph spanning cols. 3-4 for the advantages. It would have been obvious to use the Jeskey method/apparatus to draw the Roba fibers, for the advantages that Jeskey teaches. Jeskey uses changes in gas flow rates to change the temperature: col. 5, lines 11-28.

Using Jeskey as the primary reference: Jeskey discloses the invention, except for the control of tension and the change in dispersion. At col. 2, lines 2-35 of Roba (and elsewhere) it is disclosed that changing the tension in the fiber results in improved performance of fibers. Col. 7, lines 4-7 of Roba teaches to change the tension by changing the temperature of the furnace. It would have been obvious to improve the Jeskey fiber method by using the Roba teaching of varying the temperature so as to change the tension so as to improve the dispersion characteristics of the fiber. It is also noted that on Page 2 of the substitute specification, Applicant admits that it is known to control the dispersion by changing the draw tension.

The tension measuring step is disclosed at col. 8, lines 29-35.

As to the heat changing being "in response to the measured glass draw tension". Roba doesn't explicitly mention this. However, col. 9, lines 28-34 discloses controlling the process "on the basis of the values of pre-set **process parameter** values and on the basis of the signals" from the sensors "along the tower". Tension is a signal from a sensor along the tower, see col. 8, lines 29-35. There is no indication of any process parameter values which are "pre-set"; however col. 7, line 5 identifies the furnace temperature (and thus heat) is a **process parameter** which is controlled. It is deemed that the passage at col. 9, lines 28-34 sets forth that any of the disclosed **process parameters** could use pre-set values: since Roba only mentions a few **process parameters** it is deemed that any discussion of **process parameters** encompasses at least each of the specific **process parameters** mentioned by Roba.

Claim 3, it would have been obvious to have a heater or furnace in the same room or building, so that human operators can stay warm in the winter months. It is noted that the claims do not indicate how "close" the auxiliary heater has to be: close is a relative term. Such would be closer to the moon. Furthermore, the claim does not indicate what the heat is supplied to. It would be improper for Examiner to define the claim as requiring the heat be supplied to the preform – because the claim does not indicate such. As to the amount of heat being changed – of course over time the heat would change. A one-kilowatt heater will give out one kilowatt-hour after one hour's use. The heat output would change cumulatively over time: two kilowatt-hours over 2 hours, three kWhr after three hours....

Claim 4: it would have been obvious to shut off the Jeskey apparatus after the fiber is made, because there is no reason to spend money to keep it in a heated condition. It is deemed that shutting it off controls the heat dissipated and changes a dissipating condition.

Claim 5: it is deemed that during the insertion of the preform (or just prior thereto) that the positional relation is changed: from the preform being external to the tube, to the tube being external to the preform.

Response to Arguments

Applicant's arguments with respect to claims 1 and 3-5 have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harvey and Chludzinski are cited as being cumulative to Halvorson.

It is argued that Roba and Jeskey do not teach the change of the composition of the gas. This is not convincing because such is a well-known process parameter which effects heat transfer during fiber drawing. Roba clearly teaches that one can alter more than one process parameter to create the change in dispersion.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Hoffmann 1-3-05
Primary Examiner
Art Unit 1731

jmh